SECTION 116 – VALVES

1. GENERAL

Valves shall be furnished and installed where called for on the drawings, and shall be the same size as the pipeline in which they are placed. Valves shall have the same type of joint as used in the pipeline unless otherwise shown. All valves shall be factory tested to double working pressure. Each valve shall have the working pressure and the manufacturer's name or initial cast on the body. All valves shall open when turned to the left.

When installed with a valve box, valves shall be equipped with a two-inch square wrench nut and with extension stems terminating the wrench nut approximately 48 inches below the surface to permit use of the operating wrench.

2. RESILIENT SEAT/WEDGE VALVES

Resilient seat or wedge valves shall meet AWWA Specification C509; working pressure, iron body, non-rising stems with double O-ring seals, and be equipped with a square wrench nut. Flanges shall be faced and drilled to American 125-pound standard. Stems shall be solid bronze or stainless steel and stem nuts shall be solid bronze. The interior and exterior surfaces of the valves shall be protected with an epoxy coating. All Resilient Seat/Wedge Valves shall be manufactured by either of the following firms: Clow or Mueller or AVK. Refer to Section 51, entitled, "Basis of Payment" for additional specifications.

3. VALVE BOXES

Valve boxes and lids shall be cast iron (Tyler Series 6850 or approved equal), of the extension type, of suitable length and diameter for the individual location, and equipped with removable cast iron covers. Water valve box lids shall be marked "Water".

4. FIRE HYDRANTS

Fire hydrants shall be of the post style compression type, conforming to AWWA Specification C502. Suitable for 150 pound working pressure; tested and guaranteed for 300 pounds pressure. All hydrants shall have a 5" valve opening with 6" inlet. All hydrant outlets shall be provided with nozzle caps, which will be secured to hydrant barrel with non-kink chain. The nut on each cap shall be identical in size and shape as the pentagonal shaped hydrant-operating nut. The nozzle thread shall be the National Standard Fire Hose Coupling Screw Thread. The operating nut shall be open left and shall be made of ductile iron. The hydrant drain system shall be sealed and will automatically flush with each hydrant operation. Each hydrant shall have a safety traffic flange and safety stem coupling which allow the hydrant barrel to be rotated 360 degrees, so that pumper nozzle will face the street. All fire hydrants shall be equipped with a weather cap attached to the operating nut. Each hydrant shall include an effective oil reservoir for lubrication of the stem threads and bearing surfaces. The valve seat, drain ring or shoe bushing and drain channel shall be bronze. The internal surface of the shoe shall be epoxy coated.

All fire hydrants shall be manufactured by either of the following firms: Mueller (“Centurion”), U.S. Pipe Metrowflow/M-03 or American AVK (2700/2780). All fire hydrants shall be installed at the proper depth to insure the correct five-foot (5’) “bury” depth. Extensions shall be used if necessary for correct “bury” depth.

A resilient seat/wedge valve is to be furnished with each hydrant and installed as shown on the detailed drawings. The hydrant inlet connection shall be flanged fitting and the valve flange shall be bolted directly to the hydrant inlet flange.

All fire hydrants shall be furnished with 2-1/2 inch hose nozzles, and one 4-1/2 inch pumper nozzle unless otherwise noted in Section 51, entitled “Basis of Payment”.

The barrels of all hydrants above the ground line shall be painted OSHA High-Visibility Yellow. The caps and bonnets shall be painted an appropriate color to indicate the amount of hydrant flow and available water. These colors will be determined by the Salina Fire Department after the hydrants have been flow tested.